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The Value of Including Estimates of Precision
in Finished Intelligence

It has often been noted in RMS that resource management of the intelligence community is organized around the technical collection systems. There is wide agreement that this is suboptimal and that instead we should manage resources to accomplish our objective, support to intelligence users. We do attempt to assess how well collection improvements serve this purpose by estimating the increased intelligence information that may be obtained from improvements to the collection system, but no one pretends that this is optimal since only those improvements in our support to users that can be obtained through improvements to the technical collectors are considered. Though attempts have been made, it is not sufficient to simply extend this emphasis on technical collection initiatives to all collection initiatives since the most useful and cost-effective improvements in support to users may not even be discovered through this approach. Nor is it sufficient to ask how to improve processing, exploitation, dissemination, or production for the same reason — there is no guarantee that all of the most promising opportunities for improving support will be considered because the focus of this approach is a means rather than ends.

I have come to believe that the principal reason that the management of the Intelligence Community is collector oriented is that there is information to be had about the benefits of improving the collectors and, more important, there is little information available about how to improve user support. The information that would appear at first glance to be most desirable for improving intelligence community performance against its objective is direct feedback from the decisionmaker about the usefulness of our support. Measuring the value of intelligence in providing support is straightforward in the abstract, but very difficult to actually accomplish — partly because the user is a composite of a number of individuals rather than a unitary actor but principally because the outcome measure is difficult to define in a meaningful way.

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    The usefulness of additional intelligence support, or any added
information for that matter, to a decisionmaker can be defined operationally as
changing the assessment of

- o   consequences: a changed assessment of the consequences to be
       expected from selecting alternative courses of action (costs,
       benefits, and risks),

- o   uncertainty: an increase or decrease in the uncertainty surrounding
       the estimates of costs, risks, benefits anticipated from alternative
       courses of action (note that support is improved by a more accurate
       portrayal of uncertainty rather than by simply maximizing confidence
       by minimizing uncertainty — this may not be evident to the
       decisionmaker),

- o   alternatives: the addition or elimination of alternative courses of
       action from the feasible set, or

- o   timing: changes in the timing of the decision (finding that it can
       be made earlier or later) or changes in the expected timing of the
       consequences of selecting an alternative (later or earlier arrival of
       costs, benefits, and risks).

We have conducted user surveys to obtain this information but the results have
been disappointing, primarily because there is no clear audit trail available
to define the affect of intelligence information on a decision and also because
there is no unitary actor to query for informal recollection of these effects.
It is difficult as well to identify intelligence shortfalls because there is a
strong interaction between what can be done for the decisionmaker and what they
in turn request or expect. Because the demand for intelligence is ephemeral
and easily influenced by expections and changing events, it is difficult to
distinguish highly useful intelligence from barely useful intelligence and
close to impossible to make finer distinctions. Furthermore, to be usefully
precise, demand must be expressed as a result of painstaking internal
comparisons such as those made when operating under a budget. No such
discipline is imposed on the intelligence user and this inevitably diminishes
the value of user surveys.

    How then can we develop an integrated criterion for allocating resources
in the community? Moving back from the user one step to the production of
intelligence could be very useful if information were readily available about
the difficulties in addressing intelligence issues that the shortages or
imprecision of intelligence information have caused. That information is
currently not available. Judging from the intelligence products I have
examined over the past 2-1/2 years, the current production process disguises

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that small amount of information about uncertainty that would ordinarily be
evident to the reader by suppressing disagreements uncovered through
coordination by resorting to vaguer language or by eliminating those aspects of
the issue that are in dispute from the final version. This is exacerbated by a
style of prose that is highly readable but designed to disguise differences in
certainty from one topic to another by giving a uniform impression of certainty
mitigated by the extensive use of qualifiers in the text and by including
precise statements about highly conditional events. (This is especially
misleading when the likelihood of the conditioning events is poorly known.)

An approach that would provide substantially more information on which to
base resource decisions better would be to include formal assessments of the
accuracy and precision in the final product using, where possible, statistical
measures of bias and variation. Where the methods of statistics and
engineering could not be used (such as political analysis in some instances),
it would be sufficient to describe the range of possible values. In that case
it would be necessary to include some discussion of where in that range the
best estimate lies and why this is so. If there is no possibility of
specifying upper and lower bounds that result in a usefully narrow range, a
subjective 90% confidence interval could be specified. This is done by
indicating the upper and lower values about the estimate that define the range
that the analyst expects will include the correct value 90% of the time.

This approach would provide a wealth of information on which to base
resource allocation decisions. It would also substantially improve support to
users in two ways:

o   they would understand much better the uses and limits of the
    intelligence they receive and,

o   an additional avenue would be provided to the intelligence analyst
    for communicating concern about events with poorly estimated
    probabilities that are important nonetheless for decisionmaking.

An alternative implementation of this same approach would be to have the
process of formally specifying the accuracy and precision of intelligence
assessments assigned to a separate group of intelligence analysts. They would
be chosen for their familiarity with the bias and imprecision of intelligence
information as well as their ability to estimate the errors introduced by the
estimating procedures through sensitivity testing and contingency analysis. An
advantage of establishing a separate group for this function is that the group
could also be tasked to identify those applications most in need of improvement
and to review the potential of resource allocation proposals for providing such
improvement.

3